

TITLE OF THE INVENTION

IMPROVED BOAT CONSOLE AND PROPULSION ARRANGEMENT

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application claims priority to U.S. Provisional Patent Application Serial No. 60/409,306 filed September 9, 2002 under 35 USC § 119, which is incorporated herein in its entirety.

FIELD OF THE INVENTION

10 The subject invention relates to boats, and relates more particularly to a recreational boat that comprises console and propulsion arrangements to maximize room and to maximize driver visibility.

15 SUMMARY OF THE INVENTION

 The improved boat console and propulsion arrangement of this invention provides a new boat design which incorporates the combination of a V-drive power train, with a
20 center consoled placement of the driver seat, steering wheel and control center. This unique and nonobvious combination provides numerous benefits to the consumer, including, but not limited to, increased safety, increased visibility, increased functionality, and increased performance. Since the increase in popularity of wakeboarding, boat manufacturers have started designing boats having improved features
25 to enhance performance specifically for wakeboarding. A couple of these features comprise the provision of fillable ballasts in the boat to increase the size and improve the shape of the boat wake waves. These improvements translate into enhanced enjoyment by the wakeboarder but on the other hand translate into some possible safety concerns for the boat driver. For example, the increase in weight at or near the rear of the boat to
30 increase wake size causes the bow of the boat to ride high at normal operation speeds. As a result, it is very difficult for the driver to safely see over the bow. One embodiment of the subject invention is directed to a boat comprising a center console, a wakeboarding

rack, a V-drive power train and a seat that is permanently elevated or adjustably elevated to allow for increased visibility by the driver over the bow of the boat. In a preferred embodiment, the driver seat comprises an elevation of 20-40 inches from the boat floor. In an even more preferred embodiment, the seat comprises an elevation of 25-35 inches from the boat floor. These and other advantageous aspects of the subject invention are described in further detail below.

DESCRIPTION OF THE DRAWINGS

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Figure 1 is a top view of an embodiment of the invention. This embodiment 100 comprises a center console 110, a lower ski tow 112, a rear safety grab rail 114, a retractable ladder 116, an oversized integrated swim deck 118, removable center “sun deck cushions” 120, a steering wheel 122, and shift/throttle lever 123. Embodiment 100 also comprises a stern walk through space 119.

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Figure 2 is a top view of the embodiment shown in Figure 1 with engine cutaway, showing the V-drive transmission 124.

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Figure 3 is a side view with engine cutaway, and also shows the rudder 126, strut 128, propeller 130, prop shaft 132 and tracking fins 134. This embodiment also shows how the oversized deck 118 and positioning of the propeller reduces potential serious injury, as the propeller is tucked well under the boat away from users on the back deck 118.

Figure 4 is a side view of the embodiment shown in Figure 3 without engine cutaway. This view also shows the wakeboard tow tower 136 with ski tow 137 and wakeboard racks 139, and safety grab rail 138.

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Figure 5 is a side view of an embodiment designed for sport-fishing. This embodiment 200 comprises a T-Top tower 210, a safety grabrail 212, rod holders 214 and outriggers 216.

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Figure 6 is a top view of the embodiment in Figure 5 with T-top removed. The embodiment 200 comprises a walk through stern space 218 on both sides and optional hinged deck cushions 220.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

5 The invention provides an improved center console boat design with V-drive propulsion (hereinafter referred to as a “CCV” or center console V-drive). This inventive design can be incorporated into a variety of boat types. The traditional benefits of center console design include, but are not limited to, the following;

10 1. Improved safety due to the increased visibility for the driver. There is no need for the driver to stand, sit on the back of the driver’s seat, or sit on the gunnel to see over the bow. Visibility is increased because the driver is sitting higher than with the conventional placement of the driver’s seat on the starboard side. Visibility is also increased because passengers are not sitting directly in front of the driver as on a
15 conventional bowrider. The visibility of a skier, wakeboarder, or inflatable rider is improved because the driver is sitting higher and in the center of the boat.

 2. The boat rides level with the driver only. Leaning or listing to the starboard side due to the unbalanced load when there is only a driver (no passengers) can cause reduced steering control. Steering control is also improved when the boat is riding in a
20 level position with a center console.

 3. Driver ride is smoother and more solid in rough water and when crossing large wakes due to the fact that the driver is riding directly over the V-portion of the hull, instead of over a flatter portion of the hull that is closer to the starboard chine.

25 4. Interior seating area is increased due to the improved use of space. The interior also feels more comfortable because of its openness.

 5. The ability to mount a T-top (aluminum tower) to function as a platform for
30 mounting rod holders, outriggers, spreader lights, and electronics equipment to enhance the functionality as a sport-fishing boat

The traditional benefits of a V-drive ower train include, but are not limited to, the following:

1. Increased interior space from placing the engine at the stern of the boat versus a
5 direct-drive inboard where the engine is placed mid ship.
2. Power is tranferred to the propeller more efficiently due to fewer gears than with a conventional stern drive.
3. Positive throttle response is achieved with the ability to easily hold a steady speed at lower speeds (e.g., 16-24 mph). This makes it easy to pull wakeboarders or
10 small children on skis without the boat prematurely planing off. This planing problem is prevalent on inboard/outboard and outboard power train configurations.
4. Increased safety from the placement of the propeller forward of the transom versus aft of the transom as an inboard/outboards and outboards. There is a reduced risk of injury to skiers and swimmers at the stern of the boat.
- 15 5. There is lower maintenance than with inboard/outboards and outboards due to fewer moving parts in the lower gear units and trim mechanisms.

Wakeboard boats are typically V-drives, and preferably have the following characteristics: clean, well-defined, large wakes; functional tower with ski tow; a lot of interior space; smooth, dry ride in rough water or when crossing wakes; and easy to hold
20 steady speeds (16 to 24 mph).

Sport-fishing boats, on the other hand, are typically center console, and preferably have the following characteristics: reliability/low maintenance; a lot of room to walk around; functional T-top tower; quick planing with low bowrise; unobstructed gunnels; and smooth, dry ride in rough water.

25 The improved boat console and propulsion arrangement of this invention thus provides a nonobvious connection and brings together two design features that the boating industry has not thought to combine. The result is an extremely versatile sport

boat, “the First True Sort Utility for the Water.” The inventive “CCV” (center console V-drive) will change the way consumers use boats. They will no longer just buy a bowrider or a fishing boat. Instead, they will now be able to have the best of both worlds in a center console V-drive (CCV)

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U.S. Patent Nos. 3,691,862; 3,763,961; and 3,793,980 teach examples of V-drive transmission systems. U.S. Patent No. 5,979,350 and 6,374,762 teach a wakeboard tower and rack that can be adapted for use in accord with the teachings herein, as well as fillable ballast tanks that can be incorporated into the subject boat design. The teachings
10 of the references cited throughout the specification are incorporated herein by this reference to the extent they are not inconsistent with the teachings herein. It should be understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this
15 application and the scope of the appended claims.